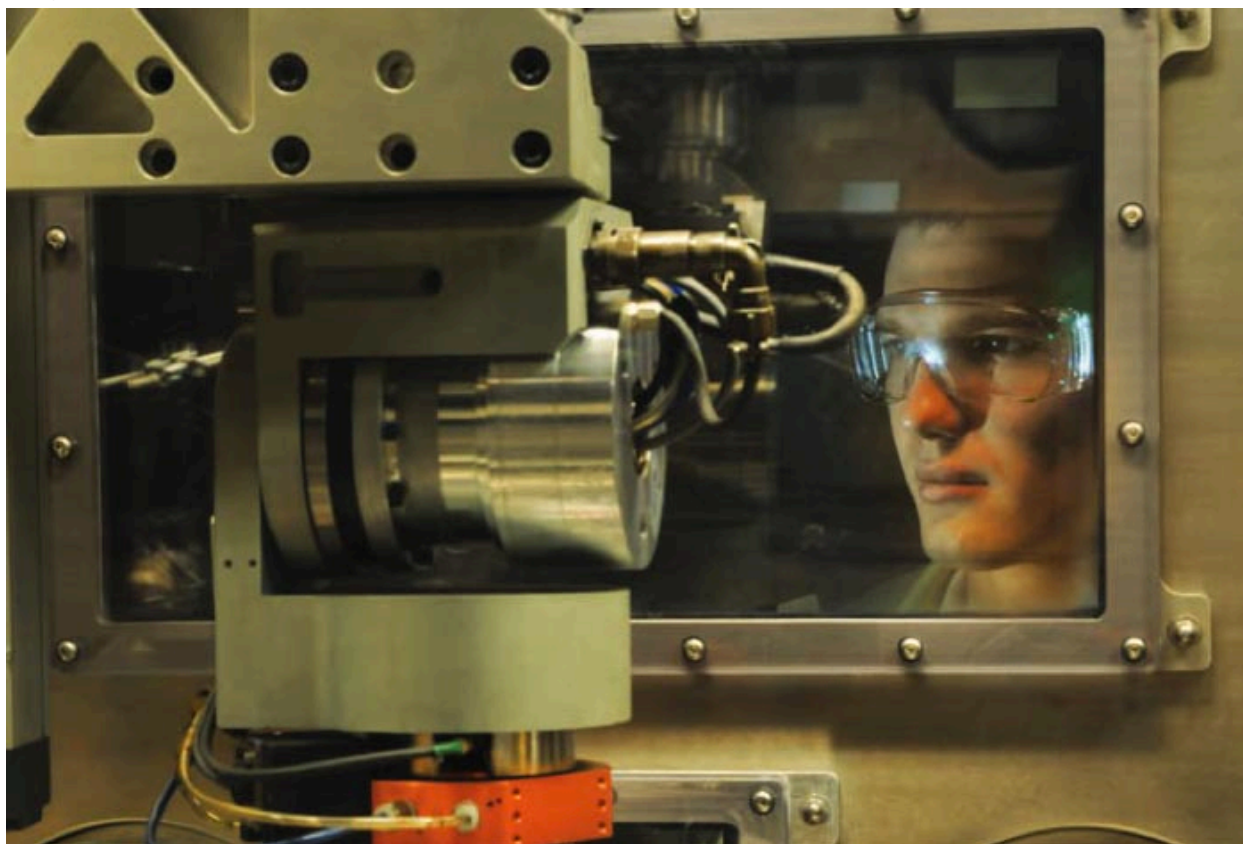


## Military students access top R&D

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[Return to homepage](#)

## Cadets and midshipmen expand their scientific knowledge at world-class Los Alamos facilities

Each summer, the Lab hosts cadets and midshipmen from the nation's military academies, immersing some of the nation's future leaders into our science that tackles increasingly technical national security challenges.

Nearly a dozen such students experience Los Alamos each summer, and they remark they are impressed with by the hands-on research opportunities the Lab provides.

"There are a lot of summer training programs out there, but most are class-like," said U.S. Air Force cadet Dale Becker, mentored by the Physics Division's Extreme Fluids Team. "This was nothing like I expected. It was real life, not just theoretical. I was given a problem and had to come up with an elegant solution."

The students—more than a dozen per term—work on complex research projects across a broad spectrum of disciplines: thermodynamics, materials science, computer modeling, space science and alternative energy technology, to name just a few.

One student, for example, used Monte Carlo code modeling to investigate neutron flux in relation to materials that might be used in a nuclear reactor.

Some worked with the fundamentals of nuclear weapons and learned about high explosives, methods of detection for monitoring nuclear tests and the effort involved with maintaining and validating the performance and safety of the nuclear weapons stockpile.

"It was interesting to see how the research aspect works," said a naval midshipman, adding that the interdisciplinary work across multiple fields at the Lab is unique. "Before coming to Los Alamos, I didn't know what researchers actually did.

Another student in this program, partnered with Los Alamos scientists to work with RAPTOR, the Laboratory's robotic optical telescope array that independently scans the universe and can also be used to detect objects orbiting Earth.

Others predicted a meteor's potential effect on an urban community. A few studied optical phenomena and blindness caused by improvised explosive devices.

The Lab's Bioscience Division also welcomes academy students, one of whom, Calla Glavin, worked with developers of the Laboratory's award-winning Ultrasonic Algal Biofuel Harvester, which concentrates the cells of algae so their lipids can be extracted and used for making biofuel.

Glavin reported that her Army advisor described the program to her as "phenomenal."

#### Steering a secure nation

The students were impressed with the research and capabilities of the Laboratory, and in turn, they impressed the Lab. An often-repeated accolade from the mentors was that the military students are "top of their class," enthusiastic and disciplined and fearlessly conquering unfamiliar research.

At the end of their summer sessions, the students return to their military academies with new skills—and with solid knowledge about Los Alamos National Laboratory's diverse capabilities.

In the future, many of these students will be officers—perhaps even in the military or government's upper echelon. They may have a hand in shaping policy, and their experience at the Lab will help ensure they make informed decisions to support national security.

Are you a military academy student interested in learning about this program? [Click here for more program information.](#)

[» Return to homepage](#)

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